

REMARKS

The following is intended as a full and complete response to the Office Action mailed on June 30, 2004. Claims 1-7 were examined. The Examiner rejected claims 1, 2, 4, 5, and 7 under 35 U.S.C. § 103(a) as obvious in view of Chang-Hasnain. Additionally, the Examiner objected to claims 3 and 6 as depending from a rejected base claim, but allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims. The Examiner also objected to the drawings, indicating that Figures 1-3 should include the legend "Prior Art."

Rejections under 35 U.S.C. § 103(a)

The Examiner rejected claims 1, 2, 4, 5, and 7 under 35 U.S.C. § 103(a) as obvious in view of Chang-Hasnain (U.S. Patent No. 6,233,263). In response, Applicants are amending claim 1 to correct matters of form and are amending claim 4 to clarify the invention. As the rejection might be applied to amended claims 1 and 4, Applicants respectfully traverse.

Claim 1, as amended, recites the limitation "the lasers of the WDM transmission system are set at a desired wavelength by comparing each error signal with a comparison value that is unique in the capture range for a chosen slope sign" and also recites the limitation "and the desired wavelength is set taking into account the slope sign of the error signal." Claim 4, as amended, recites the limitation "the wavelengths of the WDM transmission system lying exactly alternately on positive slopes and on negative slopes of the error signal and the desired wavelength set taking into account the positive and negative slopes of the error signal." This error signal is the difference between the desired ITU wavelength and the wavelength of the actual signal. Chang-Hasnain does not teach or suggest these limitations.

Chang-Hasnain discloses that the difference signal, or error signal, generated by output signals from two photodetectors controls the output wavelength of the laser. This difference signal is equal to zero at the desired ITU wavelength. Importantly, there is no teaching whatsoever in Chang-Hasnain that the sign of the slope of the difference signal is used to control the laser. In fact, Chang-Hasnain indicates that the magnitude of the difference signal, not the sign, let alone the sign of the slope, is used to control the laser. See Chang-Hasnain at column 7,

lines 2-14. Therefore, Applicants contend that Chang-Hasnain fails to teach or suggest each and every limitation of claims 1 and 4. For this reason, Applicants respectfully submit that claims 1 and 4 are in condition for allowance and request withdrawal of the § 103(a) rejection of these claims.

Additionally, the Examiner acknowledges that Chang-Hasnain does not specifically disclose the limitation “the wavelength period of the error signal is set such that it corresponds to double the wavelength spacing of two adjacent wavelengths of the WDM transmission system” recited in claim 1 or the limitation “wherein the wavelength filter is set such that the wavelength period of the error signal corresponds to double the wavelength spacing of two adjacent wavelengths of the WDM transmission system” recited in claim 4. The Examiner then concludes that In re Boesch held that discovering an optimum value of a result-effective value involves only routine skill in the art, it would have been obvious to one skilled in the art at the time the invention was made to set the wavelength monitor of Chang-Hasnain to the claimed value.

Applicants submit that case law holds that a particular parameter must first be recognized in a prior art reference as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of the variable may be characterized as routine experimentation and therefore obvious over the prior art. See In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). Therefore, in order for Chang-Hasnain to render claims 1 and 4 obvious, Chang-Hasnain must recognize that the wavelength period and wavelength spacing parameters of the error signal are result-effective variables, i.e., variables which achieve the result of extending the capture range of the wavelength monitor for the lasers of the WDM transmission system. Chang-Hasnain does not teach, show, or suggest that the parameters of wavelength period and wavelength spacing of the error signal achieve the result of extending the capture range of the wavelength monitor. Thus, according to In re Antonie, determining the optimum ranges of the wavelength period and wavelength spacing of the error signal cannot be obvious in view of Chang-Hasnain.

For the above reasons, Applicants submit that independent claims 1 and 4 as well as claims 2-3 and 5-7 dependent thereon, respectively, are in condition for allowance.

Objections to the Drawings

The Examiner objected to the drawings, requesting that Applicants add the legend "Prior Art" to Figures 1-3. In response, Applicants submit herewith corrected drawings having the legend "Prior Art" above Figures 1-3. Specifically, a Replacement Sheet for page 1 of the drawings is included herewith. Applicants therefore respectfully request removal of the objection to the drawings.

Conclusion

Based on the above remarks, Applicants believe that they have overcome all of the rejections set forth in the Office Action mailed on June 30, 2004 and that the pending claims are in condition for allowance. If the Examiner has any questions, please contact the Applicants' undersigned representative at the number provided below.

Respectfully submitted,

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